

IN THE SPECIFICATION

Page 1, between the title of the invention and the first line of the text, insert the following:

CROSS-REFERENCE TO RELATED APPLICATION

This Application is a Section 371 National Stage Application of International Application No. PCT/FR04/02444, filed September 27, 2004, not in English.

Replacement heading for the heading on Page 1, line 1:

~~1. Field of the Invention~~

FIELD OF INVENTION

Replacement heading for the heading on Page 1, line 15:

~~2. Prior art solutions~~

BACKGROUND OF THE INVENTION

Delete the heading on page 2, line 13

~~3. The drawbacks of the prior art~~

Replacement heading for the heading on Page 3, line 4:

~~4. The goals of the invention~~

SUMMARY OF THE INVENTION

Delete the heading on Page 3, line 26

~~5. Essential characteristics of the invention~~

Replacement paragraphs for the paragraphs beginning at page 4, line 1, and ending at page 4, line 19:

According to an embodiment of the invention, a distinct sub-matrix is associated with each of said antennas, said sub-matrices being obtained by subdivision of a unitary square matrix, and each of said antennas sends sub-vectors, obtained by subdivision of said vectors, respectively multiplied by said

sub-matrices, so as to form, as seen from a receiver, a single combined signal representing the multiplication of said vectors by said unitary matrix.

Thus, an embodiment of the invention relies on a wholly novel and inventive approach to the sending of a signal implementing a space-time code in a multiple-antenna system. The technique of the invention is particularly advantageous since it imposes no conditions on the channel: unlike the prior art techniques, the proposed encoding does not require the channel to be constant for the duration of the code.

The particular building of space-time codes proposed by an embodiment of the invention is totally novel, and relies on an orthogonal or unitary matrix construction for each antenna. Indeed, the use of these matrices enables a separation of the signals sent by each antenna.

In an embodiment of the invention, therefore, the system constraints are less limited than with the techniques of the prior art, and the channel diversity can be better exploited. The binary error rate performance values obtained at high signal-to-noise ratios are superior to those given in the literature.

Replacement heading for the heading on Page 6, line 16:

~~6. List of figures~~

BRIEF DESCRIPTION OF THE DRAWINGS

Replacement heading for the heading on Page 7, line 6:

~~7. Description of an embodiment of the invention~~

DETAILED DESCRIPTION OF THE ILLUSTRATIVE EMBODIMENTS